Welcome to Honors Algebra I

**Please read this packet carefully!**

I am looking forward to next year’s Algebra class and I hope that you are as well. In order to start off on the right foot next year, you are going to need to keep up on some of your math skills. Some things you will want to know:

1. This packet is due on the **first** day of school. That means as soon as you walk into the classroom I will be collecting this packet.
2. This packet is worth a **test grade.**
3. Again – due on the **first day**, worth a **test grade**!
4. Each day the packet is late you will lose 10 points off of your earned grade.
5. There is a copy of this packet on my website in case you lose yours: <http://lindenwoldhsmath.wikispaces.com/>
6. I will leave extra copies of this packet in the guidance office at the high school as well as the middle school, just in case you misplace it or need another copy.
7. You can also email me if you get stuck (please write the problem in the email, along with your name): [dstewart@lindenwold.k12.nj.us](mailto:dstewart@lindenwold.k12.nj.us)
8. HELPFUL HINT: answers can be an rational number, unless otherwise stated.
9. If you need to use google to help re-teach yourself a concept, please do so.

The packet will be graded for accuracy – not completion! Make sure you show all work neatly. If the answer can’t be read, we won’t be able to give you credit for your work and that is something neither of us wants. I hope you have a great summer and I look forward to working with you next year.

Good luck,

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Honors Algebra I

Summer Packet

**Remember:** This is worth a test grade! Show all work and read directions carefully.

While using a calculator enables you to solve problems quickly it is important that you know methods of addition, subtraction, multiplication and division without the use of a calculator.

No calculator.

You must SHOW ALL WORK for problems to receive credit, if needed attach your organized work.

Be careful, multiple is not the same as factor.

Each question is worth 2 points, except where stated.

**List all factors.**

1. 54
2. 112

**Find the least common multiple.**

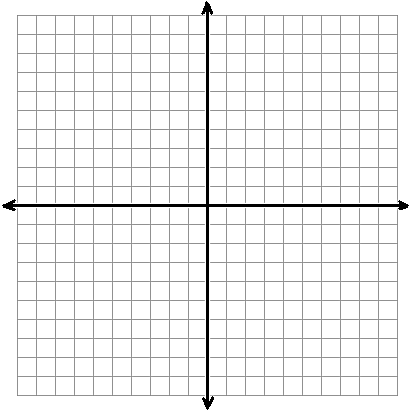
1. 15 & 3
2. 7 & 12

**Use order of operations to simplify correctly.**

1. –32 – (–3)2 – |–3|

**Write a proportion then solve proportion.**

1. If you can buy one can of pineapple chunks for $2 then how many can you buy with $10?
2. Jenny was planning a trip to the United Arab Emirates. Before going, she did some research and learned that the exchange rate is 4 Dirhams for every $1. How many Dirhams would she get if she exchanged $5?
3. Jim found out that after working for 9 months he had earned 6 days of vacation time. How many days will he have earned after working for two years?
4. The ratio of men to women at a class is 6 to 5. How many women students are there if there are 3600 men?

**Plot the given points on the coordinate plane and state the quadrant to coordinate is in.**

1. ( – 1, 2)
2. (5, 7)
3. (– 3, – 5)
4. (4, – 9)
5. (0, 0)

**Multiple Choice**.

1. Which ordered pair is not a solution of ?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

1. Which expressions is equivalent to ?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

1. Which expressions is equivalent to ?

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

**Open Ended**.

1. Cherie is laying square tiles on her square kitchen floor. She buys the tiles for $2 per square foot tile. If her total estimated cost for the tiles is $288, what is the length of her floor in feet?
2. What is the value of for ?
3. Evaluate for
4. Write an equation for the sentence: the difference of 6*n* and – 5 is – 13.
5. Simplify.
6. What is the value of?
7. Jack is taking his family to the fair. He plans to take $5 for each admission ticket plus $35 for food. Write an equation that models the amount of money Jack takes to the fair.
8. Find the perimeter.

9 cm 15 cm

12 cm

1. Find the area.

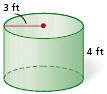
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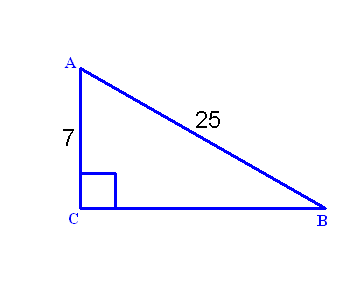
**8 cm**

1. Find the area. (leave answer in terms of )



1. Find the volume. (leave answer in terms of )



1. Find the missing side length in the right triangle. ((estimate answer to the nearest whole number))
2. Find the missing side length in the right triangle. ((estimate answer to the nearest whole number))

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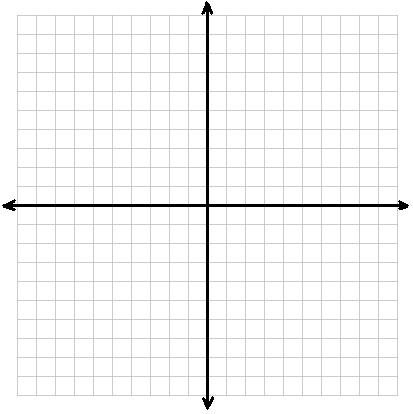
1. Which property is illustrated by (3 + 5) + 7 = 3 + (5 + 7)?
2. Write an algebraic expression that represents the statement “4 more than the product of 6 and a number”.
3. Toby purchased 5 tickets online for a show. The tickets cost $12 each plus there was a $3.50 service fee for the order. Write and solve an equation to find the amount Toby spent for the tickets.
4. What is the solution of the equation 9*x* + 12 = 39?
5. What is the solution of 4*x* – 6 = – 6*x* – 4?
6. What is the solution of 3(*x* + 1) = – 2 (*x* – 2)?
7. What is the solution of 
8. A scale drawing of a building has the scale 0.5in : 6ft. A wall is 30 ft long. How long will the wall be on the drawing?
9. A scale of a map is 0.25cm : 15mi. Determine the distance between two cities that are 6.8 cm apart on a map.
10. Four times the sum of a number and –3 is 7 more than quadruple the number. Write and solve an equation to find the number.
11. Jeremy is putting together a model rocket. The scale is 1cm : 50 ft. If the height of the actual rocket is 210 feet, how tall is the model?
12. What percent of 86 is 50 to the nearest whole percent?
13. A store’s cost for a stereo was $27. The markup was 75%. A customer purchased it on sale at 40% off the marked up price. What was the purchase price of the stereo? **[[4 points]]**
14. The school choir has 84 members. The ratio of girls to boys in the choir is 3 : 4. How many members are girls? **[[4 points]]**
15. Solve . **[[3 points]]**
16. What is the value of  when *m* = –1 and *n* = 2? **[[3 points]]**
17. Find the perimeter of a rectangle whose length is 7ft and width is 4ft.
18. Find the sum of 5 and – 16
19. Find the product of  and 
20. Find the difference of –8 and –5
21. Find the quotient of –2 and –6
22. Use the distributive property to simplify 4(*x* + 3)
23. The line through A(1, –3) and B(–2, *d*) has slope of –2. What is the value of *d*?
24. **Evaluate**: *x*3 – *x* + 3*x*2 when *x* = –1
25. **Evaluate**: *x*2 – *y*2 + *xy* when *x* = –2 and *y* = –3.

**Indicate if each problem is true or false (write the word not the letter). Make all false statements true.**

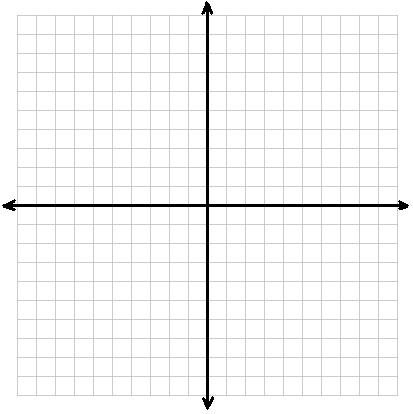
1. ( – 1)2005 = – 1
2. {0, 1, 2, 3, 4, 5, …} is the set of Whole Numbers.
3. – 7 > – 3
4. Every Integer is also a Rational Number.
5. – 42 = 16
6. 5 is a solution of 3*x* – 4 = 4*x* + 1
7. – |– 10| = – 10
8. *a* – (– *b*) = *a* – *b*
9. 0 < 6 is equivalent to 6 > 0
10. |–7.1| < – 6.9
11. |–5 – 2| – 3 = (2 + 3) – 5
12.  is undefined
13. {– 3} is the solution set of the equation 4*x* – 1 = 5*x* + 2

**Graph the following lines.** ((Make a table if necessary.))

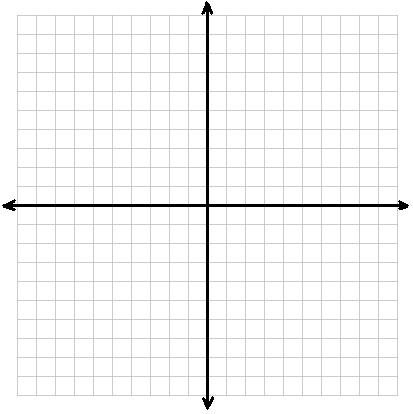
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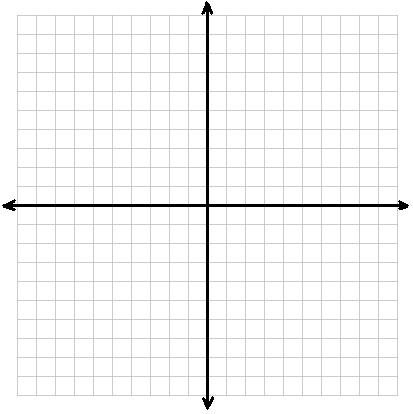
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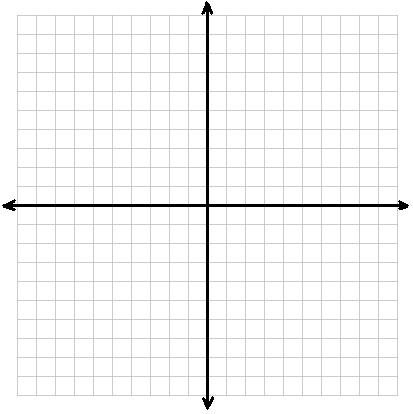
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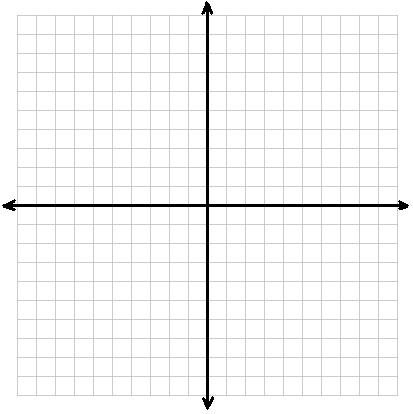
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